

LIQUID-LEVEL SENSOR HAVING MULTIPLE SOLID  
OPTICAL CONDUCTORS WITH SURFACE DISCONTINUITIES

ABSTRACT OF THE DISCLOSURE

5 A liquid-level sensor is used to sense the level of a liquid which may be  
present within a volume to different heights above the bottom of the volume. The  
sensor has at least two solid optical conductors, wherein each solid optical  
conductor includes an outer surface having at least one reflective surface  
discontinuity of sufficient size to interfere with a total internal reflection of the  
solid optical conductor when the reflective surface discontinuity does not contact  
10 the liquid. A support positions the reflective surface discontinuity of each of the  
at least two solid optical conductors at a location corresponding to a different  
height above the bottom of the volume. A light source introduces light into a first  
end of each of the solid optical conductors. A light detector structure receives  
light that has been introduced into each of the solid optical conductors and has  
15 traveled through the respective solid optical conductor at least as far as at least one  
of the reflective surface discontinuities of the respective solid optical conductor.  
The light detector structure may be a non-electrical light diffuser positioned so  
that a second end of each of the solid optical conductors directs a respective  
output beam onto a respective region of the light diffuser, with each of the  
20 respective regions having a visual indication thereon of being illuminated by its  
respective output beam.

10084707.022602